

**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION**

HUNTAIR, INC.)	
)	
Plaintiff,)	Case No. 07 C 6890
)	
vs.)	The Honorable Judge Coar
)	
CLIMATECRAFT, INC.)	Magistrate Judge Denlow
)	
Defendant.)	

HUNTAIR, INC.'S RESPONSIVE CLAIM CONSTRUCTION BRIEF

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I. INTRODUCTION

This brief responds to the Markman submission filed by Defendant ClimateCraft, Inc. ("ClimateCraft"). ClimateCraft seeks to limit the scope of the asserted claims by incorporating limitations from the detailed information contained in the specification, while at the same time attacking the specification for lack of specificity. The claims of the '046 and '775 patents are clear and concise, and are readily understood with reference to the intrinsic evidence. Plaintiff Huntair Inc. ("Huntair") presents constructions that are supported by the intrinsic evidence.

Like many accused infringers, ClimateCraft attempts to denigrate the patents in suit by attacking their level of disclosure,¹ by claiming that the inventor waived his right to seek claim coverage by virtue of statements made in the prosecution history, and by introducing extrinsic evidence to distort and twist the meaning of the patent claims. ClimateCraft also seeks to improperly construe the claims as "means-plus-function" limitations in order to support an argument that the claims are invalid. As discussed below, these are mere excuses to avoid liability for practicing Huntair's pioneering and commercially valuable invention without license or permission.

Huntair defied conventional thinking in the heating, ventilating and air conditioning ("HVAC") industry by designing an air-handling system that replaced larger fans with a number of smaller fans (Pl. Ex. A, '046 patent col.3 ll.16-23.) Since the idea was radically different than the approach taken by the industry for many decades, it was initially met with a great deal of resistance. (Pl. Ex. I, Hopkins Decl. ¶ 7 at 5.) Five years later, the invention is the backbone of Huntair's business and is a commercial success. Huntair's success has naturally spawned imitators – one of which is defendant ClimateCraft.

Although using a number of fans to replace larger fans in an air-handling system provides a host of benefits, the two patents in suit focus primarily on one of the benefits – the ability to adjust the operation of the installed system based on the actual conditions present in the building, so that the installed array can be operated more efficiently than could an equivalent prior art system. People who design HVAC systems recognize these benefits of the technology and have

¹ Although ClimateCraft takes the position that the claim terms are incapable of being understood, it is apparently not so sanguine in its position that it does not propose a construction for those terms. ClimateCraft should not be allowed to hedge its bets by proposing a contingent construction. At a minimum the Court should consider the ability of ClimateCraft to propose a construction when evaluating ClimateCraft's indefiniteness arguments.

adopted the patented technology in many applications, making it lucrative to Huntair and imitated by Huntair's competitors. HVAC design engineers are required to design HVAC systems for the worst case scenario and even to accommodate unknown demands that may be put on the system over the life of the system. (*Id.* ¶ 2(b) at 3.) As a result, these systems are typically "over-engineered" with capacity that is far more robust than necessary to meet the average every day needs of the building.

ClimateCraft, an imitator of Huntair's fan array, attacks the patents for failing to disclose a mathematical "algorithm" or a "formula" for controlling the fan array to run at nearly peak efficiency. As discussed below, a person actually working in the HVAC industry would readily understand what the claims of the asserted patents mean and the principles of operation associated with running a reduced number of fans, or controlling fan speed, to allow the system to run in an efficient manner. ClimateCraft relies primarily on extrinsic evidence, largely in the form of expert testimony from Dr. James Rice. Judging by his curriculum vitae, it appears that Dr. Rice has never actually designed an HVAC system. His Declaration focuses on academic issues associated with the theory of choosing fans and motors in the design phase of an HVAC system, but it does not address the operation of an *installed* system. ClimateCraft's brief completely misses the point that a system's design inherently limits how the system can meet demand after it is installed - a fact readily understood by those of skill in the HVAC field. The utility of the patented fanwall system lies in the fact that it allows the user increased options for meeting the demand in the system.

ClimateCraft further attempts to unnecessarily complicate claim construction by relying on extrinsic evidence, misquoting the prosecution history and ignoring portions of the specification. Furthermore, ClimateCraft excises words from the claims, taking the disputed terms completely out of context, in order to support an argument that the terms are indefinite and unclear. When read in context, the meanings of these claim terms – "control system," "array controller" and "substantially peak efficiency" – are readily understood by persons skilled in the art.

Each of the arguments presented by ClimateCraft attempts to distort the evidence with the goal of avoiding liability for practicing Huntair's proprietary technology. The claims are readily understood by a person skilled in the art when they are read in the context of the other

claim language and the intrinsic evidence. Furthermore, the claims contain no means-plus-function limitations.

In addition, the inventor did not disclaim manual control of the fans to achieve nearly peak efficiency during prosecution of the patents. Likewise, the inventor did not limit the claims to operating the fan units at variable speeds. When the facts surrounding what was actually said at the United States Patent and Trademark Office are taken in the context of the issues presented at that time, ClimateCraft's arguments do not scratch the surface of meeting its heavy burden of establishing that the inventor clearly and unambiguously disclaimed subject matter during prosecution of the patents.

When the layers of ClimateCraft's arguments are peeled away, they reveal an attempt to make this invention more complicated than it actually is in order to attack the patent and to read numerous limitations into the claims which simply are not present. Huntair presents claim interpretations that are supported by the intrinsic evidence, and which interpret the claim language in context. The Court should uniformly reject ClimateCraft's positions.

II. **ARGUMENT**

A. THE PATENT SPECIFICATIONS DO NOT LIMIT CONTROL FOR PEAK EFFICIENCY TO ONE EMBODIMENT

ClimateCraft argues that only some of the embodiments in the patent specifications are related to "peak efficiency." (Def. Br. at 3-5.)² The patent specification itself makes no such distinction, and in fact, all of the embodiments disclosed in the specification are capable of being operated at peak efficiency. ClimateCraft cites to portions of the specification without providing any context and ignores other portions of the specification entirely to make this argument.

When the patent specification refers to a "peak efficiency embodiment" it makes reference to *this* peak efficiency embodiment, not *the* peak efficiency embodiment. ('046 patent col.6 l.25.) The language is *not* used in the specification to set apart the array controller as the only implementation of the invention that can be used to operate the fan array at nearly peak efficiency. Nowhere does the specification of the asserted patents discuss that there are different embodiments directed to different and specific aspects of the invention. ClimateCraft suggests

²ClimateCraft only cites to those embodiments that refer to the preferred "array controller" as bearing on peak efficiency.

that such a distinction exists and points to snippets of the patent specification to support what it presents as a clear delineation of embodiments in the specification. No such delineation exists.

The asserted patent claims all include limitations directed to controlling the fan array to operate at nearly peak efficiency. The patent specifications include a section entitled "Controllability," which begins at the bottom of column 6 of the patent. ('046 patent col.6 l.60.) This section of the specification identifies several options for controlling the fan array. To be sure, the first paragraph of that section describes the preferred embodiment array controller as a "peak efficiency embodiment." (*Id.* at col.6 ll.60 – col.7 l.4.) ClimateCraft points to that portion of the Controllability section to support its argument that there is a separate and distinct peak efficiency embodiment. (Def. Br. at 3-5.) ClimateCraft, however, ignores the next paragraph, which describes an additional example of the controllability at great length, and contemplates manual control of the array:

For example, in the 5x5 fan array such as that shown in FIGS. 5, 13, and 14, **a person desiring to control the array may select** desired air volume, a level of air flow, a pattern of air flow, **and/or how many fan units 200 to operate.** Turning first to air volume, each fan unit 200 in a 5x5 array contributes 4% of the total air. **In variable air volume systems, which is what most structures have, only the number of fan units 200 required to meet the demand would operate. A control system (that may include the array controller 300) would be used to take fan units 200 on line (an "ON" fan unit 200) and off line (an "OFF" fan unit 200) individually.** This ability to turn fan units 200 on and off could effectively eliminate the need for a variable frequency drive. Similarly, each fan unit 200 in a 5x5 array uses 4% of the total power and produces 4% of the level of air flow. **Using a control system to take fan units 200 on line and off line allows a user to control power usage and/or air flow.**

('046 patent col.7 ll.4-20 (emphases added).) This paragraph is an example of a control system (that may include the array controller) that can be used to manually operate the array in a more efficient manner. As is plain from the language of claim 1 of the '046 patent, the ability to control the number of fans to operate is how the array is operated at nearly peak efficiency.

The inventor described manual control of the array as an example of a peak efficiency embodiment ("Using a control system to take fan units 200 on line and off line allows a user to control power usage and/or air flow."). (*Id.* at col.7 ll.19-20.) The discussion of controllability is not limited to the preferred embodiment array controller, and includes manual operation of the

fan array. There is no basis for ClimateCraft's bifurcation of the specification into embodiments directed to peak efficiency, and other embodiments.

Furthermore, the inventor pointed to Figures 5, 13 and 14 as examples of controllability. (*Id.* at col.7 ll.4-5.) Figures 13 and 14 identify the array controller 300. Figure 5 does not depict the array controller 300. If, as urged by ClimateCraft, only those embodiments that are included an array controller were directed to controlling for peak efficiency, then Figure 5 would not be an example if ClimateCraft's interpretation were accurate.

There is simply no basis provided in the patent for bifurcating the specification as proposed by ClimateCraft into "peak efficiency" embodiments and non peak efficiency embodiments.

B. THE TERMS "ARRAY CONTROLLER" AND "CONTROL SYSTEM" ARE NOT MEANS-PLUS-FUNCTION LIMITATIONS

ClimateCraft attempts to shoehorn these claims into "means-plus-function" claims. The terms "array controller" and "control system" are not means-plus-function limitations, and it is legal error to construe them that way. ClimateCraft raises this argument in an attempt to place limitations on the claims that are simply not present. The claims are not written in means-plus-function language; the patent examiner did not treat the claims as means-plus-function limitations during prosecution; and ClimateCraft has not presented evidence to overcome the presumption that these claim limitations are not means-plus-function limitations.

Under 35 U.S.C. § 112 ¶ 6, claims can recite purely functional limitations. *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1368 (Fed. Cir. 2002). When a claim is in fact written as a means-plus-function limitation, the claim is defined by the structures disclosed in the specification and their equivalents. If the claim limitation contains the word "means," there is a presumption that it is a means-plus-function limitation subject to § 112 ¶ 6. *Id.* However, if the claim limitation does *not* use the word "means," there is a presumption that it is *not* a means-plus-function limitation. *Id.*; *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1023 (Fed. Cir. 2006).

ClimateCraft pays lip service to this presumption, but the argument requires more attention because "the term 'means' is central to the analysis." *Apex Inc. v. Raritan Computer, Inc.*, 325 F.3d 1364, 1372 (Fed. Cir. 2003) (quoting *Personalized Media Commc'ns, LLC v. Intl'l Trade Comm'n*, 161 F.3d 696, 703 (Fed. Cir. 1998)). Indeed, "the presumption flowing from the

absence of the term 'means' is a strong one that is not readily overcome." *DePuy Spine*, 469 F.3d at 1023 (quoting *Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1358 (Fed. Cir. 2004)).

Even ClimateCraft's own cited cases recognize that it is rare and highly unusual to construe claims as containing means-plus-function limitations when they do not recite the word "means." For example, in *Mass. Inst. of Tech. v. Abacus Software*, the Federal Circuit reversed the district court's construction of "aesthetic correction circuitry," as a means-plus-function limitation, further stating:

[T]he dissent appears to misapprehend the strength of the presumption that applies when the term 'means' does not appear in the claim We have seldom held that a limitation not using the term 'means' must be considered to be in means-plus-function form, and the circumstances must be unusual to overcome the presumption.

462 F.3d 1344, 1356 (Fed. Cir. 2006) (internal citations and quotations omitted). Indeed, in 2004, the Federal Circuit noted that in the past eight years, it had only once construed a non-"means" term in means-plus-function form. *Lighting World*, 382 F.3d at 1362.³

In order to overcome the "strong" presumption that a non-"means" limitation is not means-plus-function, ClimateCraft must show that the disputed claim terms, "as understood by one of ordinary skill in the art . . . fail[] to recite sufficiently definite structure or else recite[] a function without reciting sufficient structure for performing that function." *Apex*, 325 F.3d at 1373. The claim need not recite a specific structure to avoid § 112 ¶ 6. Rather, "it is sufficient if the claim term is used in common parlance or by persons of skill in the pertinent art to designate structure, even if the term covers a broad class of structures and even if the term identifies the structures by their function." *Mass Inst. of Tech.*, 462 F.3d at 1356 (internal quotations omitted); *Personalized Media*, 161 F.3d at 705 ("Even though the term 'detector' does not specifically evoke a particular structure, it does convey to one knowledgeable in the art a variety of structures known as 'detectors.'"); *DePuy Spine*, 469 F.3d at 1024 ("[T]he overall impression of the claims

³ In that one case, *Mas-Hamilton Group v. LaGard, Inc.*, which ClimateCraft cites in its brief, the Federal Circuit construed the term "lever moving element" as a means-plus-function limitation because the specification disclosed the term as "[m]eans . . . for moving the lever." 156 F.3d 1206, 1213-14 (Fed. Cir. 1998); *Lighting World*, 382 F.3d at 1362. Thus, in that single case, the intrinsic evidence itself used the term "means" to define the claim term.

and specification of the . . . patent is that 'compression member' implied structure to one of ordinary skill in the art."). As the Federal Circuit explained:

[W]hile it is true that the term [at issue] does not bring to mind a particular structure, that point is not dispositive. What is important is whether the term is one that is understood to describe structure, as opposed to a term that is simply a nonce word or a verbal construct that is not recognized as the name of structure and is simply a substitute for the term 'means for.'

Lighting World, 382 F.3d at 1360.

Surrounding language in the claims can provide a person of skill in the art with additional information disclosing the structure. *See Apex*, 325 F.3d at 1374 ("[E]very use of the term in the asserted claims includes additional adjectival qualifications further identifying sufficient structure to perform the claimed functions to one of ordinary skill in the art."); *Personalized Media*, 161 F.3d at 705 ("An adjectival qualification . . . placed upon otherwise sufficiently definite structure . . . further narrows the scope of those structures covered by the claim and makes the term more definite.").

In those rare instances where courts apply means-plus-function limitations to non-means language, the term is essentially a substitute for "means" and just as generic. *Mass. Inst. of Tech.*, 462 F.3d at 1354 ("[T]he generic terms 'mechanism,' 'means,' 'element,' and 'device,' typically do not connote sufficiently definite structure."); *cf. Personalized Media*, 161 F.3d at 704 ("'Detector' is not a generic structural term such as 'means,' 'element,' or 'device'; nor is it a coined term lacking a clear meaning, such as 'widget' or 'ram-a-fram.'").

ClimateCraft has no evidence to refute the strong presumption that the "array controller" and "control system" claim terms are not means-plus-function limitations. ClimateCraft's only argument is that "[o]ne of ordinary skill in the art would not identify the claimed term as reciting specific structure and logic." (Def. Br. at 20.) Not only does ClimateCraft offer no support for this proposition, it applies the wrong standard. The claims do not *need* to require specific structures, so long as a person of ordinary skill in the art would understand the broad class of structures implied by the claim language. *DePuy Spine*, 469 F.3d at 1024; *Personalized Media*, 161 F.3d at 705.

And Huntair, through its expert, has shown that one of ordinary skill in the art would readily understand the structure implied by the "control system" and "array controller" terms. (See Pl. Ex. F, Karvelis Aff. ¶ 9 at 2; Pl. Ex. L, Karvelis Response Aff. ¶ 11 at 2-3.) Even if the

specification does not disclose a particular structure for the "control system" and "array controller," those of skill would understand the terms broadly to encompass manual and/or automatic control systems and controllers for air handling systems. (*See* Karvelis Aff. ¶ 14 at 3; Karvelis Response Aff. ¶ 11 at 2); *Apex*, 325 F.3d at 1373. The context in which these "array controller" and "control system" terms appear in the claims provides further clarification as to the types of disclosed structures. (*See, e.g.*, Pl. Ex. B, '775 patent, claim 1, step (d) ("an array controller for controlling said at least six fan units to run at substantially peak efficiency by strategically turning selective ones of said at least six fan units on and off")); *Personalized Media*, 161 F.3d at 704. ClimateCraft cannot overcome its heavy burden of imposing means-plus-function limitations that contravene the claim terms' plain meaning. *See CCS Fitness*, 288 F.3d at 1369.

C. THE INVENTOR DID NOT DISCLAIM MANUAL CONTROL DURING THE PROSECUTION OF THE '775 PATENT

ClimateCraft argues that the inventor specifically disclaimed coverage for the manual operation of the fan array by virtue of statements made with respect to United States Patent No. 4,767,262 to Simon ("Simon patent") during prosecution of the '775 patent. Manual control of the fan units is implicated by the "control system" claim elements that appear in the claims of the '046 patent. The inventor did not disclaim anything with respect to the Simon patent and is not estopped from claiming coverage for manual control.

First, in order to act as a disclaimer, the language used by the inventor must amount to a *clear and unambiguous disavowal of any right* to the disputed claim scope. *Middleton, Inc. v. 3M*, 311 F.3d 1384, 1388 (Fed. Cir. 2002). The inventor here simply and correctly observed that there was no teaching in the Simon patent to control the fans to achieve peak efficiency. That statement is true today, as it was when it was made. There is no teaching or suggestion in Simon (or any other reference for that matter) to use any type of system to selectively disable fans to run the remaining fans at nearly peak efficiency.

The inventor disclosed the Simon patent to the examiner *in the specification of the asserted patents*. (Def. Ex. 36 at CL 39, Application of 3/22/04 at p.5 ll.13-15; *see* '046 patent col.3 ll.35-37.) The Simon patent discloses the use of multiple fans for cooling electronic equipment, such as a laptop computer. Although the patent was directed to a non-analogous

field, the examiner nevertheless rejected all of the pending claims. (*Id.* at CL 124-25, Office Action of 9/10/04, at 2-3.)

The inventor amended the claims in response to this rejection, adding language to specify that the claims were directed to cooling the air in a building, and that the array controller in the present invention could be used to operate the array at peak efficiency. (*See id.* at CL 136-42, Amdt. of 3/14/05 at 4-10.) The inventor, through his attorney, also included remarks concerning the rejection pursuant to the Simon reference. Those remarks focused on the substantial differences between the environment of Simon (cooling a computer) and the present claims (cooling a building):

The Examiner rejected claims 1-20 under 35 USC § 102(b) as being anticipated by U.S. Patent No. 4,767,262 to Simon (the "Simon reference"). Applicant has also reviewed U.S. Patent No. 6,072,397 to Ostrowski and U.S. Patent No. 5,370,576 to Krofchalk. None of these cited references is directed to a fan array fan section in an air-handling system as defined in the specification of the present application. (See page 2 of the original specification. "An air-handling system is defined as a system that includes components designed to work together in order to condition air as part of the primary system for ventilation of structures." Structures are defined in the specification as buildings or rooms.) Applicant would like to note that he considers these references nonanalogous as the issues relating to fans for computer systems or small electrical appliances operate under completely different principles than those applicable to air-handling systems. Issues that are significant to air-handling systems are non-issues in fans for computer systems or small electrical appliances. For example, the quantity of air and the weight of the fan units are non-issues in fans for computer systems or small electrical appliances, but are significant to air-handling systems. Another non-issue in fans for computer systems or small electrical appliances that is significant to air-handling systems is the control over air delivery rates to meet varying demands under varying pressure loads and the controlling of the fan array to achieve optimum efficiency by selectively turning fans off or on to meet system diversity caused by filter loading and/or cooling requirements related to the process or external environment.

(*Id.* at CL 143-44, Amdt. of 3/14/05 at 11-12.) Significantly, the only claims that were at issue in the '775 patent at the time that these statements were made were claims that were directed to the automatic array controller. Contrary to what ClimateCraft attempts to suggest, the inventor did not cancel pending claims directed to a manual control in light of the Simon patent. The

broadier claims to a "control system" that includes manual control were not added until the follow-on application that ultimately led to the '046 patent. For the reasons discussed below, the examiner never raised the Simon reference during the prosecution of the '046 patent.

The inventor pointed out that the pending claims were directed to a conditioning system for cooling buildings, not computers. (*Id.* at CL 138, Amdt. dated 3/14/05 at 6 (amending claim 11 to state "said air-handling compartment positionable within a structure such that said air-handling system conditions the air of said structure").) (Claim 1 is also directed to an "air-handling system.") The inventor also pointed out that the Simon patent did not disclose or teach operating the fan array at substantially peak efficiency as recited in the then-pending claims. (*Id.* at CL 145, Amdt. of 3/14/05 at 13.) The inventor then told the patent office that the Simon patent did not disclose or teach controlling its array for peak efficiency:

Claims 1 and 12 specifically recite an array controller programmed to operate the fan units at peak efficiency. The Simon reference teaches two ways to control the fans. First, the user can manually control the number of fans by inserting and connecting the desired number of fans. (Column 3, lines 21-23.) Second, an electric control block can supply a control voltage to the number of fans provided in the fan slide in unit to control the speed of the fans. (Column 3, lines 24-33.) In other words, the Simon reference allows no air to be supplied by manually removing or disconnecting the fan. Otherwise, all the fans are controlled by a single control voltage, that can be varied, but it runs all the fans at the same speed. At lower speeds, the fans would be inefficient. The IDS references appear to recognize that fan units may be taken off-line (e.g. for maintenance). **However, these references do not appear to teach or suggest any means by which a controller can operate said plurality of fan units at peak efficiency by strategically turning on and off selective ones of said plurality of fan units.**

(*Id.* at 13-14, Amdt. at 145-46 (emphases added).) ClimateCraft argues that the Simon patent teaches manual control of the fans, and that the inventor's statements disclaim manual control. (Def. Br. at 6-7.) This is neither the teaching of the Simon patent nor the argument advanced by the inventor. The Simon patent was distinguished because it did not disclose or teach a system in which efficiency was increased by selectively turning fans on and off during operation. The Simon patent was not distinguished on the basis of a difference between automatic and manual operation, as ClimateCraft argues. More specifically, the Simon patent teaches, at the cited portions, that the user can install as many fans as he or she wishes to operate. There is no

teaching of selectively turning fans on and off during operation. This is the distinction drawn by the inventor, as he argued that the Simon patent did not discuss running the fans at peak efficiency. The only teaching in Simon is that the user could select how many fans he or she wished to install in the computer cooling device, with no discussion whatsoever of running the fans efficiently. Hence, the difference between manual and automatic systems was irrelevant to distinguishing the Simon patent, was not urged by the inventor, and did not result in claim scope disclaimer.

The inventor's comments established, during the prosecution of the '775 patent, that the Simon reference was irrelevant because it was not directed to an air-handling system for conditioning the air in a building, and because there was absolutely no teaching of using any type of control system to account for peak efficiency. Thus, the inventor did not disclaim anything. The issue was *never raised again* by the examiner in the subsequent prosecution.

D. THE TERM "EFFICIENCY" DOES NOT REFER TO "STATIC EFFICIENCY"

The term "efficiency" as it is used in the asserted patent claims must be construed in the context of the remainder of the claims, as well as the intrinsic evidence. As discussed in Huntair's Opening Brief on Claim Construction, there the patent specification refers to the term "static efficiency" in only one place, and that part of the specification speaks only to the benefits to the stability of the airstream. ('046 patent col.8 ll.11-16.).

Contrary to the impression left by ClimateCraft, however, the remainder of the specification contains multiple references to "efficiency" in contexts similar to those discussed in the claims. For example, the patent specification defines efficiency in terms of the power level of the fan units ("In an alternative embodiment, the fan units 200 could all run at the same power level (e.g. efficiency and/or flow rate) of operation."). (*Id.* at col.6 ll.28-30.)

ClimateCraft argues that because the second provisional application includes a discussion of "static efficiency," the term "efficiency" is narrowly defined; however, as pointed out in Huntair's Opening Brief, static efficiency is referred to in an entirely different context. (Pl. Br. at 14; Def. Br. at 17.) Furthermore, the second provisional application is directed to noise reduction by using the fan array, and generally related to co-planar silencers. However, consulting the actual chart in that application reveals that the chart is directed to **"Optimized Energy Usage – Individual fan/motor combinations selected for peak motor efficiency."**

(Def. Ex. 23, CL 727.) This evidence actually further supports Huntair's interpretation that this is the type of efficiency that the patent claims in the context of the asserted claims.

Huntair devoted significant briefing to this issue in its opening brief. ClimateCraft has not come forward with any compelling evidence to overcome the intrinsic evidence cited by Huntair. The term efficiency as used in the claims refers to the overall power consumed by the installed system. (Karvelis Response Aff. ¶ 8 at 2.)

E. CLAIMS OF THE '046 PATENT DIRECTED TO A CONTROL SYSTEM FOR OPERATING SAID PLURALITY OF FAN UNITS AT SUBSTANTIALLY PEAK EFFICIENCY BY STRATEGICALLY TURNING ON AND OFF SELECTIVE ONES OF SAID PLURALITY OF FAN UNITS

1. A "Control System" Encompasses Manual Operation and ClimateCraft Fails to Show That It Is Limited to Automatic Control.

ClimateCraft's discussion of the claim term "control system" overlooks the requirement that the analysis begin with the claims themselves. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc), *cert. denied*, 546 U.S. 1170 (2006) ("It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude." (internal quotations omitted)). Nothing in the claims requires that a control system be automatic. ClimateCraft seeks to ignore the plain language of the claims and rely on the IEEE dictionary for its improper incorporation of an automatic limitation on the term "control system." This claim term should be construed as part of the overall phrase proposed in Huntair's Opening Brief on Claim Construction, and not as an isolated element.

2. ClimateCraft's Reliance on the Simon Reference That Was Discussed During the Prosecution of '775 Patent Is Misplaced, Because the Prosecution History and Specification of the '046 Patent Show That a "Control System" Is Not Limited to Automatic Control.

ClimateCraft argues that it a "control system" cannot be automatic in light of Huntair's "remarks and amendments in the prosecution of the prosecution history to avoid the Simon reference." As discussed above in Section II.C, Huntair was not seeking a patent for the broader "control system" at that time, and thus, did not distinguish the Simon reference on the basis of manual versus automatic control. Therefore, contrary to ClimateCraft's assertions, Huntair did not disclaim manual control for a "control system" "to distinguish its claims from the prior art." Indeed, when Huntair ultimately prosecuted the '046 patent for a "control system," there was no

discussion of the Simon reference, aside from an acknowledgment in the specification common to both patents that "[o]ther patents such as U.S. Pat. No. 4,767,262 to Simon . . . teach fan arrays for use with electronics." ('046 patent col.3 ll.35-37.) There was simply nothing in the prosecution history that comes close to the clear and unambiguous disclaimer of manual control that the law requires to support ClimateCraft's position. *Middleton*, 311 F.3d at 1388.

The prosecution history of the '046 patent reveals that the inventor clearly intended "control system" to mean something different and broader than "array controller." As the inventor explained, "Claim 1 has been amended to replace the phrase 'array controller programmed to operate' with the phrase 'control system for operating.' The new phrase is broader than the former phrase." (Def. Ex. 37 at CL 521, Amdt. of 9/8/06 at 6.) ClimateCraft acknowledges that "the 'control system' is more broad than the 'array controller.'" (Def. Br. at 23.) Also during prosecution of the '046 patent, the inventor indicated to the examiner that support for the broader claim term could be found in the specification, which states that "[a] control system (that may include an array controller 300) would be used to take fan units 200 on line (an "ON" fan unit 200) and off line (an "OFF" fan unit 200) individually." ('046 patent col.7 ll.12-15; Pl. Ex. D '046 Patent.) The prosecution history of the '046 patent, through its discussion of the language of the specification, makes clear that the "control system" is not limited to an automatic system.

F. CLAIMS OF THE '046 PATENT DIRECTED TO A CONTROL SYSTEM FOR CONTROLLING SAID PLURALITY OF FAN UNITS, SAID CONTROL SYSTEM ALLOWING CONTROL OF THE SPEED OF THE FAN UNITS SUCH THAT THEY RUN AT SUBSTANTIALLY PEAK EFFICIENCY

The term "control system" as it is used in claim 15 can be manual or automatic for the same reasons set forth with respect to the same term used in claim 1. As discussed below, there is nothing in the claim language or intrinsic evidence that requires (as urged by ClimateCraft) that this claim requires control of the speed of each fan in the array. The claim simply requires, as construed by Huntair, that the control system controls the speed of the fans in the array – even if it runs all of the fans at the same speed.

1. The Claim Language Does Not Require Differential Control.

ClimateCraft argues that the claim requires that the control system control the speed of each fan individually. (Def. Br. at 25-26.) There is no such requirement in the claim language

itself, which simply requires that the control system is capable of controlling the speed of the fan units in the array. ClimateCraft attempts to read the limitations from unasserted claim 19, which *does* specifically require that the control system control the speed of individual fan units :

A fan array fan section in an air-handling system comprising:

- (a) an air-handling compartment;
- (b) a plurality of *independently controllable* fan units;
- (c) said plurality of fan units arranged in a fan array;
- (d) said fan array positioned within said air-handling compartment;
- (e) said air-handling compartment associated with a structure such that the said air-handling system conditions the air of said structure; and
- (f) a control system for controlling the speed of the fan units in said plurality of fan units such that they run at substantially peak efficiency.

('046 patent col.14 ll.16-29 (emphasis added).) Since claim 15 does not include this limitation to independently controllable fan units, the doctrine of claim differentiation compels the conclusion that claim 15 is not so limited.

Claim 15 requires only that the control system control the speed of the fans in the array as a whole. While controlling the speed of each individual fan would be within the scope of the claim, the claim is broader than only such a configuration. Huntair's proposed construction is proper and consistent with the intrinsic evidence.

2. The Prosecution History Does Not Require Individual Control of the Fan Units.

ClimateCraft again misapplies the prosecution history in an attempt to limit the construction of claim 15 of the '046 patent. The inventor certainly did not limit the claims to control of individual fans to run at different speeds during prosecution.⁴ In distinguishing prior art references during the prosecution, the inventor described the differences between claim 1 and claim 15 by telling the examiner that claim 15 was directed to the speed of fans, not turning fans off:

Claim 15 has been amended in substantially the same manner as claim 1 except that the control system controls the speed of the individual fans, rather than turning individual fans off, to cause the plurality of fans to run at substantially peak efficiency.

⁴ While an array controller that runs individual fan units at different speeds would certainly be within the scope of claim 15, it is not *required* by claim 19.

(Def. Ex. 37 at CL 522, Amdt. of 9/8/06 at 7.). This statement is accurate, but does not state that the speed of the fans had to be controlled individually as urged by ClimateCraft. Rather, the control system had to be able to vary the speeds of the units. Claim 20, which was currently pending at the time of the amendment, added the limitation "a plurality of independently controllable fan units," while claim 15 simply claimed "plurality of fan units." (*Id.* at CL 519-20, Amdt. of 9/8/06 at 4-5.) This statement does not come close to amounting to a clear disclaimer of claim scope.

3. The Discussion of the Ray and Niedhardt Patents in the Prosecution History Does Not Disclaim Uniform Control.

In the present case, there was no clear and unambiguous disavowal of uniform control because Huntair made no statements during the prosecution of the '046 patent to restrict claim 15 to differential control in order to secure patentability. As ClimateCraft correctly notes, Claim 15, among others, was initially rejected by the examiner as anticipated under 35 U.S.C. § 102(b) by U.S. Patent No. 5,701,750 issued to Ray ("Ray patent" and U.S. Patent No. 4,021,213 issued to Niedhardt ("Niedhardt patent"). The examiner, however, did not suggest that the rejection was due to the Ray and Niedhardt patents in any way covering uniform control of the fan units. Indeed, the Ray and Niedhardt patents do not purport to claim the uniform control of the speed of the fan units in a fan array for substantially peak efficiency. (Def. Exs. 32 & 33.) Rather, as Huntair noted, the Ray patent for example "teaches 'electronic control circuitry . . . which causes each of the air supply blowers 1-4 to be operated independently'" (although they are not operated to achieve substantially peak efficiency). (CL 522.) Huntair responded by distinguishing the Ray and Niedhardt patents from claim 15 on the basis that they do not require the fans to run at substantially peak efficiency. Huntair did not reference individual versus uniform control during the prosecution history to obtain allowance. *See Middleton*, 311 F.3d at 1388 (Fed. Cir. 2002) ("This court also considers the prosecution history of the '514 patent to determine whether the applicant clearly and unambiguously "disclaimed or disavowed [any interpretation] during prosecution in order to obtain claim allowance."); *York Prods., Inc. v. Central Tractor Farm & Family Ctr.*, 99 F.3d 1568, 1575 (Fed. Cir. 1996) ("Unless altering claim language to escape an examiner rejection, a patent applicant only limits claims during prosecution by clearly disavowing claim coverage.").

In context, the language from the prosecution history that ClimateCraft spliced into its brief does not result in the surrender of uniform control of the fan units so as to limit the claim 15 to independent control of the speed of each fan unit. *See Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1346 (Fed. Cir. 2008) (evaluating single statement in prosecution that an air content reduction occurred before saturation and concluding that "[b]y no means does this statement constitute something akin to a disavowal of claim scope"). There was not a clear and unambiguous disclaimer of a claim scope of subject matter as is required to deviate from the ordinary meaning of the claims. *See Middleton*, 311 F.3d at 1388. Accordingly, the claims themselves, rather than ClimateCraft's distortion of the prosecution history, indicate that claim 15 of the '046 patent is not restricted to individual control, but rather includes uniform control of the fan units to achieve substantially peak efficiency.

G. CLAIM 1 OF THE '775 PATENT

The arguments with respect to the common elements of the claims from the '046 patent discussed above apply equally to the corresponding elements in the '775 patent. Huntair construes the terms of the '775 consistently with the similar terms of the '046 patent. Claim 1 of the '775 patent includes the limitation "an array controller for controlling said at least six fan units to run at substantially peak efficiency by strategically turning selective ones of said at least six fan units on and off." Huntair construes this claim limitation to mean "an automatic system that operates the at least six fan units at nearly peak efficiency by strategically turning on and off selective ones of the fan units."

As discussed above, the specification of the '775 patent⁵ describes the array controller as the preferred embodiment of the control system. (Pl. Ex. B, '775 patent col.6 ll.19-21.) The array controller may be programmed to operate the fan array by turning off certain fans in the fan array. (*Id.* at col.7 ll.42-55.) Contrary to the arguments put forward by ClimateCraft, this claim element is not indefinite as a person skilled in the art would be able to understand what is claimed.

The array controller as claimed in the '775 patent is the preferred embodiment that is described in the specification, and constantly cited by ClimateCraft in its attempt to graft the requirements of the preferred embodiment into the definition of the term "control system" in the '046 patent. Because ClimateCraft has no credible explanation for the fact that the inventor told

⁵ The specifications of the two asserted patents is nearly identical.

the examiner in the prosecution of the '046 patent that the term "control system" was broader than the term "array controller," it essentially pretends it never happened. This, however, is where the Court should interpret the term "array controller" in light of the preferred embodiment. The Court should not, though, read in all of the extraneous limitations proposed by ClimateCraft in the "hedge" construction it provides.

H. THE CLAIMS ARE NOT INDEFINITE

ClimateCraft erroneously applies the doctrine of indefiniteness in its construction of the claim terms, "substantially peak efficiency," "array controller," and "control system." Indefiniteness is a question of law, *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576 (Fed. Cir. 1986), which must be proved by the party asserting it by clear and convincing evidence, *see Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1375 (Fed. Cir. 1986). In order to carry this heavy burden, the party seeking to invalidate the claims must establish that the claim term is "insolubly ambiguous" to a person of ordinary skill in the art upon consulting the claim language itself, the specification, the prosecution history and the common understanding of a person working in the field.⁶ *Young v. Lumenis, Inc.*, 492 F.3d 1336, 1346 (Fed. Cir. 2007) ("Indefiniteness requires a determination whether those skilled in the art would understand what is claimed. [Making] that determination . . . involves consideration of primarily the intrinsic evidence, viz., the claim language, the specification, and the prosecution history."); *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001).

ClimateCraft's indefiniteness arguments attempt to blur the distinction between indefiniteness and enablement. For example, ClimateCraft repeatedly asserts that the term "substantially peak efficiency" renders each of the claims indefinite although numerous courts have construed the term "substantially" to mean "nearly" without concern regarding indefiniteness. In support for its assertions, ClimateCraft argues that a person of skill in the art would not be "likely to know how to accomplish" running the fans at "substantially peak efficiency." (Def. Br. at 26.) Whether a person would know how to operate the invention, however, speaks to enablement and not to indefiniteness. *See Intel Corp. v. VIA Techs., Inc.*, 319

⁶ ClimateCraft ignores the law that states that all of the intrinsic evidence is relevant to this inquiry, and focuses only on the specification.

F.3d 1357, 1366 (Fed. Cir. 2003) (patent disclosing generic core logic was not indefinite simply because "no circuitry is disclosed in the patent to show how the core logic is modified").

1. The Term "Substantially Peak Efficiency" Is Not Indefinite.

The claims of an issued patent are accompanied by a presumption of validity based on compliance with, among other things, 35 U.S.C. § 112 ¶ 2. *S3 Inc. v. NVIDIA Corp.*, 259 F.3d 1364, 1367 (Fed. Cir. 2001). The patent examiner is presumed to be a person of skill in the relevant art, and it is assumed that the patentee already had an opportunity to overcome any indefiniteness objections by amending the claims during prosecution. *See Am. Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1359 (Fed. Cir. 1984); *see also Ultra-Tex Surfaces, Inc. v. Hill Bros. Chemical Co.*, 204 F.3d 1360, 1367 (Fed. Cir. 2000) (noting with respect to an invalidity allegation based on previously considered prior art reference that "the attacker . . . has the added burden of overcoming the deference that is due to a qualified government agency presumed to have properly done its job, which includes one or more examiners who are assumed . . . to be familiar from their work with the level of skill in the art and whose duty it is to issue only valid patents").

There is no requirement that each term appearing in the claim be expressly defined in the claim or specification, provided that those skilled in the art would understand what is claimed when the claim is read in light of the specification. *Morton Int'l, Inc. v. Cardinal Chem. Co.*, 5 F.3d 1464, 1470 (Fed. Cir. 1993). Claims need not be "plain on their face in order to avoid condemnation for indefiniteness," but need only be "amenable to construction, however difficult that task may be." *Exxon*, 265 F.3d at 1375.

Words of degree such as "substantially" are descriptive terms commonly used in patent claims to avoid a strict numerical boundary to a specified parameter. *See. e.g., Ecolab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1367 (Fed. Cir. 2001) ("We note that like the term 'about,' the term 'substantially' is a descriptive term commonly used in patent claims to avoid a strict numerical boundary to the specified parameter.") (internal citations and quotations omitted); *Anchor Wall Sys., Inc. v. Rockwood Retaining Walls, Inc.*, 340 F.3d 1298, 1310-11 (Fed. Cir. 2003) ("While the term 'generally parallel,' as the district court noted, is mathematically imprecise, we note that words of approximation, such as 'generally' and 'substantially,' are descriptive terms commonly used in patent claims to avoid a strict numerical boundary to the specified parameter In this case, exact parallelism is sufficient, but not necessary, to meet

the limitation of the claim term 'generally parallel.')" (internal citations and quotations omitted). ClimateCraft's own expert, Dr. Rice, acknowledges that a person skilled in the art could understand "substantially" to mean "nearly" (Def. Br. at 19; Def. Ex. 7, Rice Decl. ¶ 49), yet he concludes that the term is incapable of being understood.

Dr. Rice loses the forest for the trees. His resume does not indicate any experience in practical installation of HVAC systems in buildings, although he states that a person skilled in the art would have such experience. (Rice Decl. ¶ 9.) As such, his analysis focuses on considerations related to theoretical design considerations, rather than a real world analysis of designing and operating a system that is to be used in an actual building, under actual operating conditions. As the inventor pointed out during the prosecution history for the '775 patent, HVAC systems are designed to meet the worst case scenario, i.e., they are over-engineered. (Hopkins Decl. ¶ 2(b) at 2-3.) The patent specification makes the same point. ('046 patent col.9 ll.31-35.)

Beyond this, all of the rest of the arguments advanced by ClimateCraft are in reality enablement arguments -- i.e., that a person of skill in the art would not be able to practice the invention as claimed. That argument is for another day. It is also incorrect. A person of skill in the art would be able to implement the invention. Although ClimateCraft repeatedly calls for a mathematical "algorithm" or a "formula" for designing a fan array to be disclosed in the patent specification, a person skilled in the art would readily recognize that there is no need for such a disclosure. There are any number of design consideration that go into designing an air handler for an individual building so that there is no single mathematic algorithm or formula that can be used to dictate what is appropriate for each and every building. Importantly, the patent does not purport to provide a specific solution for each and every situation. Rather, it provides the designer with a non-conventional approach involving substitution of a fan array for a single fan, and teaches the application of that approach. By way of illustration, the patent specification provides several examples of how an array can be implemented to replace a prior art fan approach. (*See, e.g., id.* at col.5, ll. 18-23.) It would be futile, and completely unnecessary to provide every possible permutation and implementation of the fan wall system. The patent teaches that, prior to the conventional wisdom, prior art systems can and should be replaced with multiple smaller fans, and that these multiple smaller fans can be used to operate the array more efficiently.

A person skilled in the art would understand that the motors that drive the fans in the array would operate most efficiently when they are fully loaded. (Ex. L, Karvelis Response Aff. ¶ 8 at 2.) The inventor confirmed this understanding during the prosecution of the '775 patent:

A fan array lowers energy consumption by allowing the designer to tailor the fan system output to the actual operating point of the process. It is general practice that all fan systems are designed for a worst case scenario. The worst case scenario is based on the greatest demand period which is a combination of coldest or warmest day of the year and loading parameters for filters and coils. It also includes safety factors applied to the design by the design engineer. The result is that nearly every air handler manufactured specified, manufactured, and put into service is over-designed for the normal operating condition. The excess design factors can be as high as 30% to 40% resulting in air handling systems that run at reduced efficiency. Fans and motors are most efficient at one load point at a given speed. *Motors are most efficient when nearly fully loaded.* The fan wall allows the operator to turn off fans when they are not needed thus maintaining optimal motor efficiency and lower power consumption.

(Pl. Ex. I, Hopkins Decl. ¶ 2(b) at 2-3 (emphasis added).) The patent specification refers to the "rated horsepower" of the motors that run the fans in the array, which are performance specifications that are readily available to the designer and operator of a fan array system built according to the teachings of the patent. Armed with that information it is quite easy for a skilled person to understand whether the motors in the array are running at or near their rated capacity, or whether they are running below that level.⁷ Furthermore, the specification indicates that an array controller may include a variable frequency drive ("VFD"). In systems that employ a VFD, all of the information necessary to evaluate the efficiency of the system is typically available as a readout on the screen of the VFD.

Huntair's claims meet the requirements of 35 U.S.C. § 112 ¶ 2, because a person skilled in the art, reading the claims of the '046 and '775 patents in light of the intrinsic evidence would readily understand the bounds of the claims. Huntair's expert, Dr. Albert Karvelis, acknowledged that he was able to determine the scope of the Huntair's claims when read in view of the intrinsic evidence. (Karvelis Aff. ¶ 9 at 2.) Moreover, the claims of the Huntair's patents

⁷ As discussed more fully below, the concept of "efficiency" as it is used in the claims is directed to power usage. (See '046 patent col.6 ll.28-30 ("In an alternative embodiment, the fan units 200 could all run at the same power level (e.g., efficiency and/or flow rate) of operation").)

as granted are accompanied by a presumption of validity based on compliance with, among other things, 35 U.S.C. § 112 ¶ 2. *S3 Inc.*, 259 F.3d at 1367. Because ClimateCraft has not shown that "substantially peak efficiency" is "insolubly ambiguous," the Court should not hold the term indefinite. *See Exxon*, 265 F.3d at 1375.

2. The Term "Control System" Is Not Indefinite.

ClimateCraft argues that the term "control system" is not capable of being understood by a person skilled in the art. A person skilled in the art would readily understand that there are options available at the design stage of an air-handling system for controlling the fan array. Such control systems might include manual controls or automatic controls. (Karvelis Aff. ¶ 14 at 3; Karvelis Response Aff. ¶ 11 at 2.) It is important to focus on the invention that is claimed in the patent by referring to the other words that surround the term control system. The claims are directed to a control system that allows the user to either (1) turn the fans on and off individually, or (2) to control the speed of the fans in the array. A person skilled in the art would understand that the requirements of the control system are defined by the context of the claim.

For example, if a person were choosing a "control system" for operating the lights in a room, he or she would readily understand that there were various options available. The simplest implementation would be an on/off switch. If the design parameters⁸ required that the control system be able to control the intensity of the lights in the room, then it would be apparent that the switch would have to include a dimmer. Further, if the design parameters stated that the system must allow each light to be turned off separately, then it would be evident that the system would need multiple switches.

The patent claims in the present case that contain a limitation to a "control system" are no more complicated than the example above, despite ClimateCraft's efforts to introduce layers of abstraction and confusion. ClimateCraft takes the words out of the context of the surrounding language in an effort to make the words sound vague in isolation. However, placing the words in the context of the claims renders them easily understandable. For example, the "control system" of claim 1, at a minimum, allows individual fans to be turned off and turned on. Given this context, there are a number of ways that such a system could be implemented, and a person of ordinary skill in the art would readily understand that this could be accomplished manually or

⁸ Or, by analogy, patent claim.

automatically. (Karvelis Aff. ¶ 14 at 3; Karvelis Response Aff. ¶ 11 at 2.)⁹ The remainder of the claim language provides the context necessary to understand the claimed control system.

When the claim term "control system" is read in the context of the remainder of the surrounding language there is no doubt that the claim is definite, and readily understood by a person skilled in the art. ClimateCraft has not presented clear and convincing evidence to the contrary. In fact, ClimateCraft has itself proposed a definition for the claim (albeit one that is not consistent with the intrinsic evidence).

If a person skilled in the art had any questions about the control system, he or she could seek additional guidance from the prosecution history of the asserted patents. Inventor Lawrence Hopkins submitted a Declaration in connection with the '775 patent which laid out additional information concerning the claimed invention. In that Declaration, he explained the concept of efficiency as the term was used in the patents and strategies for operating the fan motors fully loaded. (Hopkins Decl. ¶ 2(b) at 2-3 quoted at p. 11, *infra*.) A person skilled in the art would be able, in light of these comments, to understand the term "control system" that would operate the fan units.

3. The Term "Array Controller" Is Not Indefinite.

Similar to the understanding of the term control system, a person skilled in the art would readily understand the term "array controller" as used in the claims. The specification gives an example of such an array controller in the form of a variable frequency drive ("VFD"). ('046 patent col. 6 ll.31-36.)

ClimateCraft again confuses the law of indefiniteness and enablement. ClimateCraft's real complaint with the term array controller is that it claims that a person would not know how to program the array controller to operate the fan array at peak efficiency. While a person skilled in the art could certainly program an array controller to operate the installed array at peak efficiency without undue experimentation, that is not the test for indefiniteness. *See Intel*, 319 F.3d at 1366. ClimateCraft further modifies the standard of indefiniteness into an standard of enablement in its discussion of the broader claim terms "a control system for controlling the fan units in said plurality of fan units such that they run at substantially peak efficiency" and "a control system for controlling said plurality of fan units, said control system allowing control of

⁹ ClimateCraft's objections to the contrary are not well founded.

the speed of the fan units in said plurality of fan units such that they run at substantially peak efficiency." (Def. Br. at 26, 28.)

Rather than discussing whether a person of ordinary skill in the art would understand these terms, ClimateCraft examines whether the patents "teach one of ordinary skill in the art a specific structure and logic." (*Id.*) ClimateCraft goes on to discuss the alleged difficulty of "turning some [fans in an array] on and off" and "varying the speed of one fan relative to the other" to increase efficiency. (*Id.*) Whether a patent "teaches" how to practice the invention or would be "difficult" to operate are not relevant aspects of an indefiniteness analysis. *See, e.g., Personalized Media*, 161 F.3d at 705-06. ClimateCraft's discussion of whether the patent discloses how to practice the invention would implicate issues of enablement rather than definiteness. *See Intel*, 319 F.3d at 1366.

In any event, the patent provides more than sufficient information to allow a skilled person to practice the claimed invention. The patent specification teaches using the minimum number of fans necessary to meet the demand in the building. ('046 patent col.7 ll.9-12 ("In variable air volume systems, which is what most structures have, only the number of fan units 200 required to meet the demand would operate.")) The array controller would then operate the remaining fans at or near their designed efficient point of operation. (*Id.* at col.9 ll.37-38 ("[T]he array controller 300 turns off certain fan units 200 and runs the remaining fan units 200 at peak efficiency."))

III. CONCLUSION

ClimateCraft, like many patent defendants, proposes constructions that attempt to distance the claims from their plain meaning, and read in various limitations in an attempt to create non-infringement arguments. In addition, ClimateCraft resorts to extrinsic evidence to argue that the patents are unclear and otherwise invalid. In the end, however, the plain meaning of the claims read in context, and with the intrinsic evidence, compels the conclusion that the constructions offered by Huntair are correct, and that the patents are valid.

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CERTIFICATE OF SERVICE

I hereby certify that on the 21st day of July, 2008, I caused a copy of the foregoing document, HUNTAIR, INC.'S RESPONSIVE CLAIM CONSTRUCTION BRIEF, to be served by ECF upon:

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